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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,284	04/01/2004	Ray O. Chaney	C-00024-001	9507

27386 7590 04/07/2005

NORRIS, MCLAUGHLIN & MARCUS, P.A.  
875 THIRD AVE  
18TH FLOOR  
NEW YORK, NY 10022

EXAMINER

ALI, HYDER

ART UNIT PAPER NUMBER

3747

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/816,284	<b>Applicant(s)</b> CHANEY, RAY O.	
	<b>Examiner</b> HYDER ALI	<b>Art Unit</b> 3747	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 4,6 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/1/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**1. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferry (US 1,904,680).**

As to Claim 1, Ferry discloses a piston-cam engine, which includes; a drive cylinder 15; a drive piston 19 operably disposed within said cylinder 15 having a piston head 20 and a shaft 21; a support frame 2 having a generally cylindrical bearing surface 4; a drive shaft 5 rotatably movably received within said cylindrical bearing surface 4; a cam 11 having a peripheral surface and having a plurality of lobes 12,13 thereon; a roller member 23,31 connected to said piston shaft 21 and adapted for engagement with said peripheral surface of said cam 11; and biasing means 26,27 for biasing said roller member 23,31 continuously against said peripheral surface of said cam 11.

As to Claim 1, Ferry discloses a support drive plate 26,27 interconnecting said piston shaft 21 and said roller member 26,27.

**2. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al (US 5,836,234).**

As to Claim 1, Chen et al discloses a piston-cam engine, which includes; a drive cylinder 8; a drive piston 1' operably disposed within said cylinder 8 having a piston head and a shaft 9; a support frame having a generally cylindrical bearing surface; a drive shaft 7 rotatably movably received within said cylindrical bearing surface; a cam 6 having a peripheral surface and having a plurality of lobes thereon; a roller member 3 connected to said piston shaft 9 and adapted for engagement with said peripheral surface of said cam 6; and biasing means 10 for biasing said roller member 3 continuously against said peripheral surface of said cam 6.

As to Claim 2, Chen et al discloses a support drive plate 10 interconnecting said piston shaft 9 and said roller member 3.

As to Claim 3, Chen et al discloses a first slave cylinder adjacent said drive cylinder 8 and has a first slave piston 1" operably disposed in said slave cylinder and has a piston head and a shaft 9, wherein said first slave piston shaft 9 is connected to said support drive plate 10 to absorb part of a force exerted on said support plate 10 during operation of said engine.

As to Claim 5, Chen et al discloses a piston-cam engine, which includes: a drive cylinder 8; a drive piston 1' operably disposed within said cylinder 8 having a piston head and a shaft 9; a support frame having a generally cylindrical bearing surface; a drive shaft 7 rotatably movably received within said cylindrical bearing surface; a cam 6 having a peripheral surface and having a plurality of lobes thereon; a roller member 3 connected to said piston shaft 9 and adapted for engagement with said peripheral surface of said cam 7; a support drive plate 10 interconnecting said piston shaft 9 and

said roller member 3; and a first slave cylinder adjacent said drive cylinder 8 and has a first slave piston 1" operably disposed in said slave cylinder and has a piston head and a shaft 9 wherein said first slave piston shaft 9 is connected to said support drive plate 10 to absorb part of a force exerted on said support plate 10 during operation of said engine.

As to Claim 7, Chen et al discloses biasing means 10 for biasing said roller member 3 continuously against said peripheral surface of said cam 7

#### ***Allowable Subject Matter***

Claims 4,6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference by Carone (US 5,765,451) discloses a plurality of slave piston rods 28,30.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (571) 272-4836. The examiner can normally be reached on M-F (8:30-5:00).

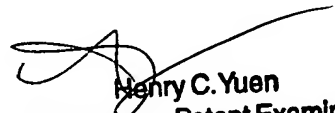
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3747

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hyder Ali

ha

  
Henry C. Yuen  
Supervisory Patent Examiner  
Group 3700